

AIM Ann Report
1875 to 1876

REPORT

OF THE

AUCKLAND INSTITUTE

FOR 1875-76.

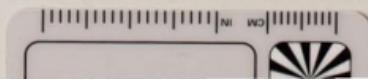
ADOPTED AT THE ANNUAL MEETING HELD FEBRUARY 21, 1876.

AUCKLAND:

Printed at the Daily Southern Cross Office, Queen-street.

1876.

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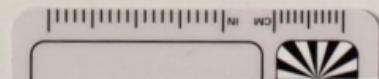
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ANNUAL REPORT
ACADEMIC DEPARTMENT



AIM Ann Report 1875 to 1876

1876.

OFFICERS

OF

THE AUCKLAND INSTITUTE.

COUNCIL.

President:

HIS HONOUR MR. JUSTICE GILLIES.

BARSTOW, R. C., Esq.

CAMPBELL, J. L., M.D.

FIRTH, J. C., Esq.

GOODALL, J., Esq., C.E.

HAULTAIN, The Hon. Col.

HEALE, T., Esq.

KINDER, Rev. J., D.D.

MITFORD, G. M., Esq.

PURCHAS, Rev. A. G., M.R.C.S.E.

STEWART, J., Esq., C.E.

WHITAKER, F., Esq.

Secretary and Treasurer:

T. F. CHEESEMAN, Esq., F.L.S.

Auditor:

T. MACFFARLANE, Esq.

AIM Ann Report 1875 to 1876

AIM Ann Report 1875 to 1876

*The following Magazines and Periodicals are Circulated
amongst the Members :—*

Quarterly Journal of Microscopical Science
Quarterly Journal of Science
Popular Science Review
Nature
Geological Magazine
Lancet
Scientific American
The Academy
The Garden
Botanical Magazine
Gardener's Chronicle
Chemical News
Engineering
Iron
Journal of Botany
Monthly Microscopical Journal
Science Gossip
Electrical and Telegraphic Review
etc. etc. etc.

WINTER SESSION, 1876.

Meetings will be held on the following Monday Evenings :

MAY 8	AUGUST 7
JUNE 5	SEPTEMBER 4
JULY 3	OCTOBER 2
OCTOBER 30.	

To commence at 7.30 p.m.

Extract from the Rules.

1. Any person desiring to become a member of the Institute, shall be proposed in writing by two members, and shall be balloted for at the next meeting of the Council.

2. New Members on election to pay one pound one shilling entrance fee, in addition to the usual subscription of one pound one shilling, the annual subscription being payable in advance on the first day of April for the then current year.

3. Members may at any time become Life-members by one payment of ten pounds ten shillings, in lieu of future annual subscriptions.

AIM Ann Report 1875 to 1876

REPORT.

THE Council of the Auckland Institute, in presenting their Eighth Annual Report, have the pleasure of informing the members that the great bar to the progress of the Institute—the absence of proper accommodation for the Museum and Library—will shortly be removed. It will be remembered that at the last annual meeting it was proposed to raise the major portion of the funds required for a new Museum by means of subscription among the members and their friends; and it will also be remembered how prompt and how liberal the response to this proposition was,—over £1,400 being subscribed at the meeting. Since then the Building Fund has been raised to nearly £1,900, by far the greater portion of which has already been placed at the disposal of the Council; while there is good reason to believe that before the list is finally closed it will have reached the amount of £2,000. The Council would here tender their very sincere and grateful thanks to those gentlemen who have so liberally contributed to this attempt to place the Institute in a position to fulfil the duties for the performance of which it was originally founded.

The design for the new building submitted to the last annual meeting has been departed from in several points; the most important being the substitution of a

AIM Ann Report 1875 to 1876

lantern in the roof for side windows, and the addition of a gallery to the large hall. It is true that these alterations have considerably increased the cost, but this disadvantage will be more than counterbalanced by the additional accommodation obtained. On the adoption of the amended designs, tenders were at once invited ; the contract being eventually let to Mr. R. Dickson for the sum of £3,377. The works are now in an advanced state, and will probably be completed in time for the opening meeting of the Session. Every attempt has been made, both by the Building Committee and by the architect, to ensure the erection of a thoroughly sound building.

It will be observed that the estimated cost exceeds by nearly £1,400 the amount likely to be realized by subscription. To meet the deficiency the Council have decided to mortgage a portion of the site, and a Bill granting the necessary powers was introduced into Parliament during its last Session, passing without opposition. In drafting the Bill, care has been taken while granting ample security to the mortgagee, to provide against the possible alienation of the property. Negotiations are now in progress that will probably result in the amount required being obtained on very favourable terms.

The seventh volume of the "Transactions of the New Zealand Institute" has been published during the year, and distributed to the members. The importance of the yearly volume, both as regarded from a scientific and a utilitarian point of view, is now generally admitted ; while the mass of valuable information annually issued respecting the natural products and resources of the colony cannot but exercise a material influence upon the progress of the whole community.

AIM Ann Report 1875 to 1876

Seven meetings have been held during the last twelve months, at which the following papers have been read:

1. Introductory Address :—by the PRESIDENT.
2. On the best line for the Submarine Cable between Australia and New Zealand :—by the Rev. A. G. PURCHAS, M.R.C.S.,E.
3. On the Coleoptera of Auckland :—by Captain T. BROUN.
4. On the Mollusca of Auckland Harbour :—by T. F. CHEESEMAN, F.L.S.
5. Notes on the Observations for the Transit of Venus :—by T. HEALE.
6. Notes on the Mason Bee :—by Major W. G. MAIR.
7. Notice of the Discovery of Moa Remains at Ellerslie :—by T. F. CHEESEMAN, F.L.S.
8. Notes on the Sword Fish (*Xiphias Gladius*) :—by T. F. CHEESEMAN, F.L.S.
9. Remarks on the *Pselaphidae* of New Zealand :—by Captain T. BROUN.
10. Description of some new species of *Pselaphidae* from New Zealand :—by D. SHARP, M.B.—Communicated by Captain T. Broun.
11. Notes on Quartz Crushing at the Thames :—by J. GOODALL, C.E.
12. A Sketch of Polynesia :—by J. ADAMS, B.A.
13. The Coals and Coalfields of the Province of Auckland :—by J. M. TUNNY, Provincial Analyst.
14. Analyses of the Auckland Fire-clays :—by J. A. POND.
15. Description of a new species of *Hymenophyllum* :—by T. F. CHEESEMAN, F.L.S.

AIM Ann Report 1875 to 1876

16. Notes on the Discovery of Moa and Moa-hunters' Remains near Whangarei :—by G. THORNE, jun.

17. Notes on the evidences of Recent Elevation in the Waikato District :—by J. STEWART, C.E.

18. On the Introduction and Acclimatisation of the Salmon :—by J. STEWART, C.E.

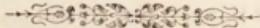
The removal of a large portion of the old buildings, together with other causes, have compelled the Council to temporarily close both the Museum and Library. Notwithstanding this, the donations received during the year have been both numerous and valuable, as may be seen from the appended list. The Council would especially direct attention to the valuable library bequeathed by the late Mr. G. F. Edmonstone, consisting of 560 volumes relating to Physical Science, many of which are costly and difficult to obtain, while all are of a class well adapted to the requirements of the Institute. In the Museum a very interesting addition has been received in the shape of a collection of Moa bones, Human remains, Stone adzes, and Obsidian flakes and chips, discovered near Whangarei by Mr. G. Thorne, jun. The thanks of the Society are also due to Captain G. Mair for a large number of the Tuatara Lizards (*Sphenodon punctatum*) from the Rurima Rocks near Matata—one of the few remaining localities for this singular animal.

While congratulating the members on the improved position of the Institute, the Council cannot conceal that a considerably increased expenditure will now be required. Enlarged accommodation would alone imply this; but when in addition it is considered that our Library has yet in a great measure to be supplied with books, and our Museum to be filled, it is obvious that the expenditure required will be large indeed: too large, in fact, to be fairly borne by an institution dependent upon

AIM Ann Report 1875 to 1876

10

private subscriptions alone for its support. There can be no doubt that the maintenance of a Free Public Library and Museum ought here, as in the Southern Provinces, to be provided for out of the public purse; and to this end the efforts of the Council will be directed. In the meantime the Council earnestly hope that all members of the community taking a sincere interest in the spread of scientific knowledge and its applications will think it a pleasure as well as a duty to contribute, directly or indirectly, to the support of the Auckland Institute.



Bringing out an exhibition and conference and a full twelve hours of open air sport and air pollution of over 1000 New Zealanders. General Vigilance, a giant sand block and bungy-jumping featured. A team of tall bungy-jumpers in search of safety and a life-time balance of air pressure were a few days earlier set up records at 100m and 120m and have since been bungy-jumping and bungy-tethering themselves down in the sky. Volunteers gathered round and

THE TREASURER IN ACCOUNT WITH THE AUCKLAND INSTITUTE.

FEBRUARY 10TH, 1875, TO FEBRUARY 15TH, 1876.

Dr.		Cr.
	£ s. d.	£ s. d.
To Balance in Bank of New Zealand, February 10th, 1875	113 18 9	63 17 2
" Entrance Fees and Subscriptions	211 1 0	24 1 6
" Rents	20 0 0	5 5 9
" Books, etc., sold	6 9 9	20 6 8
" Interest allowed on Investment Account	0 17 10	9 2 6
	<hr/>	<hr/>
	£352 7 4	£352 7 4

BUILDING FUND ACCOUNT.

	£ s. d.	£ s. d.
To Cash in Savings Bank, February 10, 1875	20 14 0	1,300 0 0
" Donations received to date	1,588 7 0	354 9 6
" Interest allowed on Deposit	20 8 6	
" Deposit on Tender	25 0 0	
	<hr/>	<hr/>
	£1,654 9 6	£1,654 9 6

INVESTMENT FUND ACCOUNT.

	£ s. d.	£ s. d.
To Cash in Savings Bank, February 10, 1875	12 8 7	23 11 5
" Life Subscription	10 10 0	
" Interest to January 1, 1876	0 17 10	
	<hr/>	<hr/>
	£23 11 5	£23 11 5

Audited and found correct, February 15, 1876,
CHARLES TOTHILL, AUDITOR.

T. F. CHEESEMAN,
TREASURER.

AIM Ann Report 1875 to 1876

ADDITIONS AND DONATIONS

TO THE

LIBRARY AND MUSEUM.

—1976—

Meteorological Report for 1874 ; Colonial Museum and Laboratory Report for 1874 ; Geological Map of New Zealand :—The Director of the Geological Survey.
Parliamentary Papers and Reports ; New Zealand Hansard for 1875 ; The Official Hand-book of New Zealand :—The Colonial Secretary.
Journal and Proceedings of the Auckland Provincial Council :—The Speaker.
Coues' Study of the Genera Geomys and Thomomys :—The United States Government.
Map of the Danubian Principalities :—The Hon. Col. Haultain.
The Object and Method of Zoological Nomenclature, by D. Sharp, M. B. :—The Author.
Publications of The New Sydenham Society for 1874-5 :—Purchased.
Publications of The Paleontographical Society for 1874 :—Purchased.
Transactions and Proceedings of the Zoological Society for 1874-5 :—Purchased.
134 volumes of Books :—Purchased out of the Provincial Government Grant for 1874.
564 volumes of Books ; case of Mathematical Instruments, &c. :—Bequeathed by the late G. F. Edmonstone, Esq.
Eighteen Australian Bird-skins :—F. R. Godfrey, Mount Ridley, Victoria.
Skeleton of Delphinus sp. :—J. A. Walker.
Skull of Whale (*Berardius Arnuxii*) :—T. Spencer.
Case of Exotic Insects :—G. H. Turner.
Specimens of the Mason Bee, with remains of its cells :—Major W. G. Mair.
Specimens of *Latia neritooides* :—R. R. Hunt.
Large Centipede :—J. Hay.
Shells from the South Sea Islands :—T. Peacock.
Zeus faber :—T. F. Cheeseman, F.L.S.
Series of Shells from the Island of Raiatea, South Pacific :—C. Voy.
Dolium variegatum, Bulimus antipodarum :—J. Webster.
New Zealand Shells :—J. George.
Star Fishes, Shells, &c. :—Hazard.

AIM Ann Report 1875 to 1876

13

Living Specimens of *Bulimus antipodarum*; *Sepioteuthis major* :—
J. H. Greenway.
New Zealand Shells :—Ingham Stephens.
Corals, Shells, &c., from the Islands; Pearl produced by the Tridacna :—H. B. Sterndale.
Hepialus virescens :—E. Higgins.
Helix Busbyi and eggs :—J. D. Gordan.
Naultinus elegans :—S. Rawlings.
Skeleton of Kiwi :—T. F. Cheeseman, F.L.S.
Fijian Shells :—W. Lodder.
Specimens of the Tuatara Lizard (*Sphenodon punctatum*) :—Captain G. Mair.
Moa bones, Human bones; Ancient Maori Adzes; Obsidian flakes and chips :—G. Thorne, jun.
Rock Specimens from Papakura :—S. Cole.
Ironstone from Waikomiti :—W. Will.
Maori Stone Adzes :—G. Lang.
Ostrea ingens and other fossils :—Mrs. W. H. Kissling.
Kauri Gum imbedded in Scoria; Wood found imbedded in Scoria :—J. Fairburn.
Auriferous Quartz from Venezuela :—A. F. Nixon.
Series of Fossils from Whangaroa :—R. Bell.
Silicified Wood from the Ruahine Mountains :—T. W. Hickson.
Nickel Ore from New Caledonia; Samples of Fire-clay :—J. M. Tunney.
Fossils from Whangape Lake :—T. Heale.
Encrustations on the Pipes of the Pumping Association :—C. Tothill.
Building Stone :—Captain Symonds.
Bog Iron Ore :—Hazard.
Galena, Silicified Wood and Cinnabar from California :—G. Scott.
Fossil Palm Seeds :—H. A. H. Monroe.
Stone Adze :—C. Hetley.
Leaf Impressions from Drury :—Hon. H. Chamberlin.
Task of Diprotodon and other Marsupial Remains; Fossils from the Portland Beds; Fin of Flying Fish :—Coleman Phillips.
Iron Ore and various Rock Specimens from Mongonui; Stone Adzes Specimens of *Danais Berenice*; Collection of Coins :—T. Ball.
Silicified Wood with Kauri Gum :—W. H. Warren.
Fossil Palm Seeds from Mongonui :—Ingham Stephens.
Moriori Skull :—E. R. Norris.
Greenstone Mere :—T. Spencer.
Portions of Blue Gum Pile perforated by the Teredo :—C. O'Neill, C.E.
New Zealand Dried Plants; Collection of Economic Grasses and Forage Plants :—T. Kirk, F.L.S.
Cones of Californian Pine Trees :—Captain Daldy.
Vegetable Caterpillars :—Ingham Stephens.

AIM Ann Report 1875 to 1876

AUCKLAND INSTITUTE.

823

LIST OF MEMBERS

FOR THE

YEAR ENDING MARCH 31ST, 1876.

Adams, J., B.A., Parnell
Aickin, G., Auckland
Aitken, W., Auckland
Alexander, C., Auckland
Allen, J. E., Auckland
Allwright, H., C.E., Auckland
Anderson, J., B.A., Auckland
Arney, Sir G. A., Auckland
Atkin, W., Auckland
Atkin, W., Kohimarama
Baber, J., C. E., Remuera
Ball, T., Mongonui
Barstow, R. C., R. M., Epsom
Bates, Rev. J., Devonport
Batger, J., Auckland
Beere, D. M., Waipukurau
Biss, S. B., Auckland
Boylan, J. T., Auckland
Breen, J., C. E., Ngaruawahia
Brett, H., Auckland
Broun, Capt. T., Tairua
Bruce, Rev. D., Auckland
Buchanan, Jas., Auckland
Buchanan, John, Auckland
Buckland, W. F., Remuera
Campbell, H., Shortland
Campbell, J. L., M. D., Auckland
Cawkwell, W. J., Auckland
Carder, W., Auckland
Chamberlin, Hon. H., Auckland
Chambers, J., Auckland
Chapman, G. T., Auckland
Cheeseman, T. F., F.L.S., Auckland
Clark, J. M., Remuera
Clarke, The Ven. Archdeacon E. B., Waimate
Clarke, W. H., C.E., Hamilton
Clarke, H. T., Tauranga
Cook, C. E., Picton
Cowie, The Right Rev. W. G., D. D., Bishop of Auckland
Cox, A., Hamilton
Cruickshank, D. B., Auckland
Curnow, J., B.A., Auckland
Daldy, W. C., Auckland
Daveney, Capt. B., Auckland
Dawson, F. W. H., M.R.C.S.E., Auckland
Day, R., M. D., Auckland
Dickson, E. B., Auckland
Drake, W., Grahamstown
Dyson, R. W., Auckland
Earl, W., Parnell
Errington, W., C.E., Auckland
Fairburn, J., Otahuhu

AIM Ann Report 1875 to 1876

15

Farmer, The Hon. J., London
Fenton, F. D., Auckland
Firth, J. C., Auckland
Fish, T., Auckland
Floyd, W. H., Tauranga
Ford, S. H., M.R.C.S.E., Russell
Fox, A., M.R.C.S.E., Grahams-
town
Fraser, G., Auckland
Fraser, Rev. J. M., Coromandel

George, J., Auckland
Gibbons, E., Onehunga
Gillies, His Honour Mr. Justice,
Auckland
Gittos, B., Auckland
Goldsbro', C. F., M.D., Parnell
Goodall, J., C.E., Auckland
Goodfellow, W., Otara
Gorrie, W., Auckland
Graham, W. K., London
Green, Major, Auckland

Hall, J. W., Grahamstown
Harding, S., C.E., Auckland
Haultain, The Hon. Col. T. M.,
Auckland
Hay, D., Parnell
Hay, J., Auckland
Heale, T., Auckland
Henderson, J., C.E., Wellington
Henderson, T., jun., Auckland
Herapath, P., Auckland
Hesketh, E., Auckland
Hill, W. J., Auckland
Hobbs, R., Pokeno
Holdship, G., Auckland
Howden, —, Auckland
Humphreys, W., Auckland
Hunt, R. R., Ngaruawahia
Hunt, W. A., Remuera

Johnston, G., Auckland
Jones, Owen, Auckland
Jones, S., Auckland

Kemp, H. T., Auckland
Kent, F. D., Auckland
Kenny, N., Ngaruawahia
Kidd, Rev. R., L.L.D., Auckland
Kinder, Rev. J., D.D., St. John's
College
Kinsella, J., Parnell
Kirk, T., F.L.S., Wellington
Kissling, G. S., Parnell
Kissling, T., Parnell
Kissling, W. H., Parnell

Kitchen, G., Anckland
Knorrp, C. B., C.E., Auckland

Lamb, J., Riverhead
Lambert, S. J., F.R.A.S., Newton
Larkworthy, F., London
Leaf, C. J., F.L.S., S.A., G.S.,
London
Lee, W., M.D., Auckland
Lindsay, J., C.E., Ngaruawahia
Lodder, W., Remuera
Luckie, D. M., Auckland
Lusk, H. H., Auckland
Lyell, J. L., Papakura
Lysnar, C., Auckland

Macmillan, C. C., Remuera
MacCormick, J. C., Auckland
Macdonald, A. V., C.E., Auckland
McDonald, D. E., C.E., Auckland
Macfarlane, J. S., Auckland
Macffarlane, T., Auckland
Macfarland, R. J., C.E., Grahams-
town
Mackechnie, E. A., Auckland
Mackellar, H. S., Wellington
Macindoe, D., Auckland
Maclean, Sir D., Napier
Maclean, Hon. E., Howick
Macrae, F., Auckland
Mair, Capt. G., Tauranga
Mair, R., Whangarei
Mair, Major W. G., R.M.,
Alexandra
Maning, F. E., Hokianga
Martin, J., Auckland
Maunsell, Ven. Archdeacon W.,
Parnell
Meinertzhangen, F. M., Napier
Mitford, G. M., Parnell
Morton, H. B., Auckland
Morrin, T., Auckland
Monro, H. A. H., Auckland
Moss, F. H., Auckland
Murdoch, D. L., Epsom

Nathan, L. D., Auckland
Nation, Col., Parnell
Nelson, Rev. C. M., M.A.,
Auckland

O'Neill, C., C.E., Auckland
O'Rorke, G. M., Onehunga
O'Sullivan, R. J., Auckland
Owen, G. B., Epsom

Peacock, T., Auckland

AIM Ann Report 1875 to 1876

16

Philips, P. A., Auckland
Philips, C., Auckland
Pollen, Hon. D., M.D., Auckland
Pond, J. A., Auckland
Pounds, J. E., Auckland
Preece, J. W., Auckland
Purchas, Rev. A. G., M.R.C.S.E.,
 Newton

Rapson, S., Kaukapakapa
Rattray, W., Auckland
Rayner, G., Coromandel
Richmond, J., Auckland
Roberton, J., Auckland
Robertson, J., Otahuhu
Ronaldson, J., Kawakawa
Rose, R., Auckland
Russell, T., Auckland

Scott, W., Paterangi
Sheath, A., Auckland
Sheehan, J., Auckland
Sheppard, A. M., Otahuhu
Shera, J. M., Auckland
Sinclair, A., Remuera
Slatter, J., Epsom
Sloman, J. F., B.A., Auckland
Smales, Rev. G., East Tamaki
Smart, J., Auckland
Smith, S. P., Parnell
Spencer, T., Grahamstown
Spencer, W. J., M.R.C.S.E.,
 Napier
Steel, Capt., Hamilton
Stephens, Ingham, Remuera
Stevenson, J. Y., Remuera
Stewart, J., C.E., Auckland
Stewart, T. M., Melbourne
Stockwell, W., L.R.C.S.E.,
 Auckland
Stone, C. J., Auckland

Taylor, Hon. C. J., Auckland
Taylor, J., Auckland
Taylor, W. W., Waiuku
Thorne, G., jun., Auckland
Tilly, Lieut. T. C., R.N.,
 Remuera
Tinne, T. F. S., Auckland
Tonks, B., Parnell
Tothill, C., Auckland
Tunny, J. M., Remuera

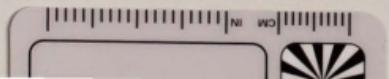
Vogel, Sir Julius, Wellington
Von der Heyde, G., Auckland

Waddington, E., M.D., Alexandra
Wallace, J., Flat Bush
Wallis, Rev. J., D.D., Auckland
Walker, R., Auckland
Ware, W., Auckland
Watt, J., Auckland
Waymouth, J., Auckland
Wayte, E., Auckland
Webster, J., Hokianga
Weetman, S., Mongonui
Whitaker, F., Auckland
White, T. L., Auckland
Whitson, R. W., Auckland
Will, W., Auckland
Williams, H., Bay of Islands
Williams, H. M., Auckland
Williams, W. H., Kawakawa
Williams, The Ven. Archdeacon
 W. L., Gisborne
Williamson, Hon. J., Auckland
Wilson, Major J., Cambridge
Wilson, J. L., Whangarei
Wilson, W. C., Auckland
Wright, F. W., L.M.B. Toronto,
 Parnell

Young, W., Kaipara



AIM Ann Report
1875 to 1876



AIM Ann Report
1875 to 1876

